



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,227	04/05/2001	Philip D. MacKenzie	9	6212

7590 08/24/2005  
Ryan, Mason & Lewis, LLP  
90 Forest Avenue  
Locust Valley, NY 11560

EXAMINER

MOORTHY, ARAVIND K

ART UNIT PAPER NUMBER

2131

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/827,227

Applicant(s)

MACKENZIE, PHILIP D.

Examiner

Aravind K. Moorthy

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,12-17,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2,9,11 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This is in response to the amendment filed on 6 June 2005.
2. Claims 1-20 are pending in the application.
3. Claims 1, 3-8, 10, 12-17, 19 and 20 have been rejected.
4. Claims 2, 9, 11 and 18 have been objected to.

### ***Response to Arguments***

5. The indicated allowability of claims 1, 3-8, 10, 12-17, 19 and 20 is withdrawn in view of the newly discovered reference(s) to Jablon. Rejections based on the newly cited reference(s) follow.

### ***Double Patenting***

**6. Claims 1 and 3-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 18 of copending Application No. 09/638320 in view of Schneier (Applied Cryptography).**

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the immediate application have all of the limitations of the copending application's claims. The dependent claims are identical. The independent claims of the immediate application, 1 and 8, only differ in that they add the limitation "wherein any portion of a result associated with the function that is outside the group is randomized" and the limitation "remove the randomization of any portion of the result associated with the function that is outside the group". All of the other limitations are claimed in the copending application. Schneier (Applied Cryptography) teaches a method of key authenticating as disclosed in the copending application. Schneier also teaches randomizing the result on page 520 to strengthen

Art Unit: 2131

the security of the cryptosystem. In view of this it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the teachings of Schneier within the copending application's system because it would prevent possible attacks to the system by further disguising the random numbers. It logically follows that the receiver must then remove the randomized portion to recover the intended data.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**7. Claims 10 and 12-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 09/638320.**

The rejection is similar to the double patenting rejection made of immediate claims 1 and 3-7, the difference being that independent claim 10 disclosed an apparatus which performs the method of claim 1. One of ordinary skill in the art would be able to implement the method of claim one as an apparatus.

**8. Claims 17 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 of copending Application No. 09/638320.**

The rejection is similar to the double patenting rejection made of immediate claims 8, the difference being that independent claim 17 disclosed an apparatus which performs the method of claim 1. One of ordinary skill in the art would be able to implement the method of claim one as an apparatus.

Art Unit: 2131

**9. Claims 19 and 20 are likewise rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 18 of copending Application No. 09/638320.**

The rejection is similar to the double patenting rejection made of immediate claims 1 and 8, the difference being that independent claims 19 and 20 disclosed an article of manufacture, which performs the method of claims 1 and 8. One of ordinary skill in the art would be able to implement the method of claim one as an article of manufacture.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**10. Claims 1, 3-8, 10, 12-17, 19, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Jablon U.S. Patent No. 6,226,383 B1 in view of Applied Cryptography (hereinafter Schneier).**

As per claims 1, 10, and 19, Schneier teaches a method for communication via a data network, between two parties that share a password, using a Diffie-Hellman type key exchange on a particular group to generate a shared secret  $g^{xy}$ , where  $g$  is the group generator known to both parties and  $x$  is an index known to one party and  $y$  is an index known to the other party, said group having a group operation and an inverse group operation, said method comprising the steps of [column 6 line 57 to column 7 line 3]: one party generating a parameter  $m$  by performing

Art Unit: 2131

the group operation on  $g^x$  and a function of at least said password, wherein any portion of a result associated with the function that is outside the group is randomized and transmitting  $m$  to the other party, whereby the other party may perform the inverse group operation on  $m$  and said function of at least said password and remove the randomization of any portion of the result associated with the function that is outside the group, to extract  $g^x$  and further calculate said shared secret  $g^{xy}$  [column 8 line 7 to column 9 line 12].

As per claims 8, 17, and 20, Schneier teaches a method for communication via a data network, between two parties that share a password, using a Diffie-Hellman type key exchange on a particular group to generate a shared secret  $g^{xy}$ , where  $g$  is the group generator known to both parties and  $x$  is an index known to one party and  $y$  is an index known to the other party, said group having a group operation and an inverse group operation, said method comprising the steps of [column 6 line 57 to column 7 line 3]: responsive to one party generating a parameter  $m$  by performing the group operation on  $g^x$  and a function of at least said password, wherein any portion of a result associated with the function that is outside the group is randomized and transmitting  $m$  to the other party, whereby the other party may perform the inverse group operation on  $m$  and said function of at least said password and remove the randomization of any portion of the result associated with the function that is outside the group, to extract  $g^x$  and further calculate said shared secret  $g^{xy}$  [column 8 line 7 to column 9 line 12].

As per claims 3 and 12, Schneier teaches one party is a client and said other party is a server [column 3, lines 21-25].

As per claims 4 and 13, Schneier teaches said one party receiving  $g^y$  from said other party and generating said shared secret  $g^{xy}$  [column 8 line 55 to column 9 line 12].

As per claims 5 and 14, Schneier teaches one party authenticating said other party by comparing a received value against a function of at least one of an identifier of said one party, an identifier of said other party,  $m$ ,  $g^y$ , the shared secret, and the password (verifier) [column 9, lines 7-63].

As per claims 6 and 15 Schneier teaches said one party transmitting a function of at least one of an identifier of said one party, an identifier of said other party  $m$ ,  $g^y$ , the shared secret, and the password (verifier), to said other party whereby the other party may authenticate said one party [column 9, lines 7-63].


As per claims 7 and 16 Schneier teaches one party generating a session key as a function of a least one of an identifier of said one party, an identifier of said other party,  $m$ ,  $g^y$ , the shared secret, and the password [column 9, lines 7-63].


***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy   
August 22, 2005

  
Primary Examiner  
AU 2131  
8/22/05